

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 April 2004 (29.04.2004)

PCT

(10) International Publication Number
WO 2004/034984 A3

- (51) International Patent Classification⁷: **C12N 5/00**
- (21) International Application Number:
PCT/US2003/032593
- (22) International Filing Date: 16 October 2003 (16.10.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/419,052 16 October 2002 (16.10.2002) US
- (71) Applicant (for all designated States except US): **THE GENERAL HOSPITAL CORPORATION** [US/US]; 55 Fruit Street, Boston, MA 02114 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **HOH, Brian, L.** [US/US]; Department of Neurosurgery, Massachusetts General Hospital, 55 Fruit Street, Boston, Ma 02114 (US). **OGILVY, Christopher, S.** [US/US]; Department of Neurosurgery, Massachusetts General Hospital, 55 Fruit Street, Boston, Ma 02114 (US). **PRYOR, Johnny, C.** [US/US]; Department of Neurosurgery, Massachusetts General Hospital, 55 Fruit Street, Boston, Ma 02114 (US). **VACANTI, Joseph, P., M., D.** [US/US]; Department of Pediatric Surgery, Massachusetts General Hospital, 55 Fruit Street, Boston, Ma 02114 (US).
- (74) Agents: **KOWALSKI, Thomas, J.** et al.; Frommer Lawrence & Haug LLP, 745 Fifth Avenue, New York, NY 10151 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
- with international search report
 - before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report:
1 July 2004
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: CELL-SEEDED TISSUE-ENGINEERED POLYMERS FOR TREATMENT OF INTRACRANIAL ANEURYSMS

(57) Abstract: Methods and materials for treating intracranial aneurysms with a tissue-engineered biopolymer are disclosed. A novel technique has been developed which utilizes a tissue-engineering biopolymer (TEBP) with living endothelial cells such that the endothelial cells will produce a neoendothelium across the aneurysm ostium. Alternatively, biocompatible materials can be coated onto aneurysm maintenance devices, and the cells can be seeded onto the biocompatible material.

WO 2004/034984 A3